

AMENDMENTS TO THE CLAIMS

1. (currently amended) A substantially manganese-free aluminum alloy rolled plate product, said plate product comprising a thickness of at least 12 mm and being formed from an alloy consisting essentially of (in percent by weight): Cu [[3.6]] 3.8 - 4.2 [[4.5]]%, Mg 1.0 - 1.6%, Zr 0.08 - 0.20%, about 300 ppm ~~Sc 0.02-0.05%~~, Fe up to 0.08%, Si up to 0.09%, Mn less than 0.05%, remainder aluminum and incident impurities.
2. (canceled)
3. (currently amended) An aluminum alloy rolled plate product according to claim 1, wherein Zr is present in an amount from 0.08 - 0.14%.
4. (currently amended) An aluminum alloy rolled plate product according to claim 1, wherein Zr is present in an amount from 0.10 - 0.14%.
5. (currently amended) An aluminum alloy rolled plate product according to claim 1, having a recrystallized volume fraction of 5% maximum.
6. (currently amended) An aluminum alloy rolled plate product according to claim 1, wherein Mn is present in an amount of < 0.01%.
7. (currently amended) An aluminum alloy rolled plate product according to claim 1, comprising at least ~~having one or more~~ of the following combinations of properties
 - a. a tensile yield strength in the longitudinal direction ($TYS_{(L)}$) of more than 400 MPa, and an apparent fracture toughness $K_{app(T-L)}$ of more than 110 $Mpa\sqrt{m}$, measured according to ASTM E 561 in the T-L orientation on a specimen with a width of $W=127$ mm;
 - b. an ultimate tensile strength in the longitudinal direction ($UTS_{(L)}$) of more than 450 MPa, and an elongation at fracture in the longitudinal direction of more than

24%;

c. a tensile yield strength in the longitudinal direction ($TYS_{(L)}$) of more than 400 MPa, and a Kahn stress R_e of at least 180 MPa.

8. (currently amended) An aluminum alloy rolled plate product according to claim 1 comprising a ~~sheet~~ plate having at least one ~~or more~~ of the following combinations of properties

a. a $UTS_{(L)}$ of more than 500 MPa, preferably more than 520 Mpa, and even more preferably more than 530 Mpa, and a $K_{app(T-L)}$ of more than $75 \text{ Mpa}\sqrt{m}$, measured according to ASTM E 647 on a 6.35 mm thick C(T) specimen with a width of $W=40 \text{ mm}$;

b. a tensile yield strength in the longitudinal direction ($TYS_{(L)}$) of more than 450 Mpa, and preferably more than 460 Mpa, and a $K_{app(T-L)}$ of more than $77 \text{ Mpa}\sqrt{m}$, measured according to ASTM E 561 on a 6.35 mm thick C(T) specimen with a width of $W=40 \text{ mm}$;

c. a tensile yield strength in the longitudinal direction ($TYS_{(L)}$) ~~omore~~ more than 350 MPa, preferably more than 400 MPa and even more preferably more than 450 MPa, and a Kahn stress R_e of at least 190 MPa.

9. (canceled)

10. (currently amended) An aluminum alloy rolled plate product according to claim 1 comprising a plate in T351 temper having a da/dn in T-L direction which fulfills ~~fulfils~~ at least one of the following conditions:

- da/dn less than $3.0 \cdot 10^{-5} \text{ mm/cycles}$ at $\Delta K = 10 \text{ Mpa}\sqrt{m}$,
- da/dn less than $1.0 \cdot 10^{-4} \text{ mm/cycles}$ at $\Delta K = 15 \text{ MP}\sqrt{m}$,
- da/dn less than $1.0 \cdot 10^{-3} \text{ mm/cycles}$ at $\Delta K = 25 \text{ MPa}\sqrt{m}$,
- da/dn less than $3 \cdot 10^{-3} \text{ mm/cycles}$ at $\Delta K = 30 \text{ MPa}\sqrt{m}$.

11. (currently amended) An aluminum alloy rolled plate product according to claim 1, exhibiting in a corrosion test according to ASTM G 110, a maximum intergranular attack of less than 80 μm in T39 temper, and/or less than 200 μm in T851 temper, and/or less than 250 μm in T89 temper, and/or less than 300 μm in T351 temper.
12. (currently amended) An aluminum alloy rolled plate product according to claim 1, exhibiting in a corrosion test according to ASTM G 110 a maximum intergranular attack of less than 70 μm in T39 temper, and/or less than 180 μm in T851 temper, and/or less than 220 μm in T89 temper, and/or less than 270 μm in T351 temper.
13. (original) A lower wing skin structural member made in an aluminum alloy rolled plate product according to claim 1.
14. (canceled)
15. (withdrawn) A method for obtaining an aluminum alloy rolled product according to claim 1, wherein said rolled product comprises a plate, said method comprising:
 - (a) Casting a rolling ingot, followed by optional stress relieving, and scalping,
 - (b) Homogenizing at a temperature between 450 and 510°C,
 - (c) Hot-rolling on a reversing mill, preferably with an exit temperature between 350 and 390 °C,
 - (d) Optionally, for plate with a thickness of less than about 30 mm, conducting at least one intermediate reheating to about 480°C, followed by one or more hot-rolling passes, the final exit temperature optionally being between 350 and 370 °C,
 - (e) Solution heat treating at a temperature between 490 and 510 °C, followed by water quenching and natural aging,
 - (f) Cold working by stretching alone or cold rolling followed by stretching, optionally followed by artificial aging.
16. (canceled)

17. (original) An alloy comprising a composition selected from the group consisting of: (in weight %)

Si	Fe	Cu	Mn	Mg	Ti	Zr	Sc
<0.06	0.06	4.12	0.40	1.37	0.022		
<0.06	0.06	3.81	0.008	1.41	0.022	0.109	
<0.06	0.07	3.81	0.008	1.36	0.024	0.107	0.028
<0.06	0.05	4.20	0.24	1.23	0.016	0.11	0.032
<0.06	0.06	4.14	0.51	1.24	0.019	0.11	0.032

- 18-22. (canceled)

23. (currently amended) An aluminum alloy rolled plate product according to claim 3, having a recrystallized volume fraction of 5% maximum.
24. (currently amended) An aluminum alloy rolled plate product according to claim 4, having a recrystallized volume fraction of 5% maximum.
25. (canceled)
26. (currently amended) An aluminum alloy rolled plate product according to claim 3, wherein Mn is present in an amount of <0.01%.
27. (currently amended) An aluminum alloy rolled plate product according to claim 4, wherein Mn is present in an amount of <0.01%.
28. (currently amended) An aluminum alloy rolled plate product according to claim 5, wherein Mn is present in an amount of <0.01%.

29. (canceled)
30. (currently amended) An aluminum alloy rolled plate product according to claim 3, comprising having at least one or more of the following combinations of properties:
- a. a tensile yield strength in the longitudinal direction ($TYS_{(L)}$) of more than 400 MPa, and an apparent fracture toughness $K_{app(T-L)}$ of more than $110 \text{ MPa}\sqrt{\text{m}}$, measured according to ASTM E 561 in the T-L orientation on a specimen with a width of $W=127 \text{ mm}$;
 - b. an ultimate tensile strength in the longitudinal direction ($UTS_{(L)}$) of more than 450 MPa, and an elongation at fracture in the longitudinal direction of more than 24%;
 - c. a tensile yield strength in the longitudinal direction ($TYS_{(L)}$) of more than 400 MPa, and a Kahn stress R_e of at least 180 MPa.
31. (currently amended) An aluminum alloy rolled plate product according to claim 3, having comprising at least one or more of the following combinations of properties:
- a. tensile yield strength in the longitudinal direction ($TYS_{(L)}$) of more than 400 MPa, and an apparent fracture toughness $K_{app(T-L)}$ of more than $110 \text{ MPa}\sqrt{\text{m}}$, measured according to ASTM E 561 in the T-L orientation on a specimen with a width of $W=127 \text{ mm}$;
 - b. an ultimate tensile strength in the longitudinal direction ($UTS_{(L)}$) of more than 450 MPa, and an elongation at fracture in the longitudinal direction of more than 24%;
 - c. a tensile yield strength in the longitudinal direction ($TYS_{(L)}$) of more than 400 MPa, and a Kahn stress R_e of at least 180 MPa.
32. (canceled)
33. (currently amended) An aluminum alloy rolled plate product according to claim 3,

comprising a plate comprising at least having one ~~or more~~ of the following combinations of properties:

- a. a $UTS_{(L)}$ of more than 500 MPa, and a $K_{app(T-L)}$ of more than $75 \text{ MPa}\sqrt{\text{m}}$, measured according to ASTM E 647 on a 6.35 mm thick C(T) specimen with a width of $W=40 \text{ mm}$;
- b. a tensile yield strength in the longitudinal direction ($TYS_{(L)}$) of more than 450 MPa, and a $K_{app(T-L)}$ of more than $77 \text{ MPa}\sqrt{\text{m}}$, measured according to ASTM E 561 on a 6.35 mm thick C(T) specimen with a width of $W=40 \text{ mm}$;
- c. a tensile yield strength in the longitudinal direction ($TYS_{(L)}$) of more than 350 MPa, and a Kahn stress R_e of at least 190 MPa.

34. (currently amended) An aluminum alloy rolled plate product according to claim 4, comprising a plate ~~having~~ comprising at least one ~~or more~~ ~~or more~~ of the following combinations of properties:

- a. a $UTS_{(L)}$ of more than 500 MPa, and a $K_{app(T-L)}$ of more than $75 \text{ MPa}\sqrt{\text{m}}$, measured according to ASTM E 647 on a 6.35 mm thick C(T) specimen with a width of $W=40 \text{ mm}$;
- b. a tensile yield strength in the longitudinal direction ($TYS_{(L)}$) of more than 450 MPa, and a $K_{app(T-L)}$ of more than $77 \text{ MPa}\sqrt{\text{m}}$, measured according to ASTM E 561 on a 6.35 mm thick C(T) specimen with a width of $W=40 \text{ mm}$;
- c. a tensile yield strength in the longitudinal direction ($TYS_{(L)}$) of more than 350 MPa, and a Kahn stress R_e of at least 190 MPa.

35. (currently amended) An aluminum alloy rolled plate product according to claim 5, comprising a plate comprising at least having one ~~or more~~ ~~or more~~ of the following combinations of properties:

- a. a $UTS_{(L)}$ of more than 500 MPa, and a $K_{app(T-L)}$ of more than $75 \text{ MPa}\sqrt{\text{m}}$, measured according to ASTM E 647 on a 6.35 mm thick C(T) specimen with a width of $W=40 \text{ mm}$;
- b. a tensile yield strength in the longitudinal direction ($TYS_{(L)}$) of more than 450

MPa, and $K_{app(T-L)}$ of more than $77 \text{ MPa}\sqrt{\text{m}}$, measured according to ASTM E 561 on a 6.35 mm thick C(T) specimen with a width of $W=40 \text{ mm}$;

c. a tensile yield strength in the longitudinal direction ($TYS_{(L)}$) of more than 350 MPa, and a Kahn stress R_e of at least 190 MPa.

36. (currently amended) An aluminum alloy rolled plate product according to claim 6, comprising a plate comprising at least ~~having one or more~~ of the following combinations of properties:

a. a $UTS_{(L)}$ of more than 500 MPa, and a $K_{app(T-L)}$ of more than $75 \text{ MPa}\sqrt{\text{m}}$, measured according to ASTM E 647 on a 6.35 mm thick C(T) specimen with a width of $W=40 \text{ mm}$;

b. a tensile yield strength in the longitudinal direction ($TYS_{(L)}$) of more than 450 MPa, and a $K_{app(T-L)}$ of more than $77 \text{ MPa}\sqrt{\text{m}}$, measured according to ASTM E 561 on a 6.35 mm thick C(T) specimen with a width of $W=40 \text{ mm}$;

c. a tensile yield strength in the longitudinal direction ($TYS_{(L)}$) of more than 350 MPa, and a Kahn stress R_e of at least 190 MPa.

37. (currently amended) An aluminum alloy rolled plate product according to claim 7, comprising a plate comprising at least ~~having one or more~~ of the following combinations of properties:

a. a $UTS_{(L)}$ of more than 500 MPa, and a $K_{app(T-L)}$ of more than $75 \text{ MPa}\sqrt{\text{m}}$, measured according to ASTM E 647 on a 6.35 mm thick C(T) specimen with a width of $W=40 \text{ mm}$;

b. a tensile yield strength in the longitudinal direction ($TYS_{(L)}$) of more than 450 MPa, and a $K_{app(L-T)}$ of more than $77 \text{ MPa}\sqrt{\text{m}}$, measured according to ASTM E 561 on a 6.35 mm thick C(T) specimen with a width of $W=40 \text{ mm}$;

c. a tensile yield strength in the longitudinal direction ($TYS_{(L)}$) of more than 350 MPa, and a Kahn stress R_e of at least 190 MPa.

38. (canceled)

39. (canceled)
40. (canceled)
41. (canceled)
42. (canceled)
43. (canceled)
44. (canceled)
45. (canceled)
46. (currently amended) An aluminum alloy rolled plate product according to claim 3, comprising a plate in T351 temper having a da/dn in T-L direction which fulfills ~~fulfils~~-at least one of the following conditions:
- da/dn less than $3.0 \cdot 10^{-5}$ mm/cycles at $\Delta K = 10 \text{ MPa}\sqrt{\text{m}}$,
 - da/dn less than $1.0 \cdot 10^{-4}$ mm/cycles at $\Delta K = 15 \text{ MPa}\sqrt{\text{m}}$,
 - da/dn less than $1.0 \cdot 10^{-3}$ mm/cycles at $\Delta K = 25 \text{ MPa}\sqrt{\text{m}}$,
 - da/dn less than $3 \cdot 10^{-3}$ mm/cycles at $\Delta K = 30 \text{ MPa}\sqrt{\text{m}}$.
47. (currently amended) An aluminum alloy rolled plate product according to claim 4, comprising a plate in T351 temper having a da/dn in T-L direction which fulfills ~~fulfils~~-at least one of the following conditions:
- da/dn less than $3.0 \cdot 10^{-5}$ mm/cycles at $\Delta K = 10 \text{ MPa}\sqrt{\text{m}}$,
 - da/dn less than $1.0 \cdot 10^{-4}$ mm/cycles at $\Delta K = 15 \text{ MPa}\sqrt{\text{m}}$,
 - da/dn less than $1.0 \cdot 10^{-3}$ mm/cycles at $\Delta K = 25 \text{ MPa}\sqrt{\text{m}}$,
 - da/dn less than $3 \cdot 10^{-3}$ mm/cycles at $\Delta K = 30 \text{ MPa}\sqrt{\text{m}}$.
48. (currently amended) An aluminum alloy rolled plate product according to claim 5, comprising a plate in T351 temper having a da/dn in T-L direction which fulfills ~~fulfils~~-at least one of the following conditions:

- da/dn less than $3.0 \cdot 10^{-5}$ mm/cycles at $\Delta K = 10 \text{ MPa}\sqrt{\text{m}}$,
- da/dn less than $1.0 \cdot 10^{-4}$ mm/cycles at $\Delta K = 15 \text{ MPa}\sqrt{\text{m}}$,
- da/dn less than $1.0 \cdot 10^{-3}$ mm/cycles at $\Delta K = 25 \text{ MPa}\sqrt{\text{m}}$,
- da/dn less than $3 \cdot 10^{-3}$ mm/cycles at $\Delta K = 30 \text{ MPa}\sqrt{\text{m}}$.

49. (currently amended) An aluminum alloy rolled plate product according to claim 6, comprising a plate in T351 temper having a da/dn in T-L direction which fulfills ~~fulfills~~ at least one of the following conditions:

- da/dn less than $3.0 \cdot 10^{-5}$ mm/cycles at $\Delta K = 10 \text{ MPa}\sqrt{\text{m}}$,
- da/dn less than $1.0 \cdot 10^{-4}$ mm/cycles at $\Delta K = 15 \text{ MPa}\sqrt{\text{m}}$,
- da/dn less than $1.0 \cdot 10^{-3}$ mm/cycles at $\Delta K = 25 \text{ MPa}\sqrt{\text{m}}$,
- da/dn less than $3 \cdot 10^{-3}$ mm/cycles at $\Delta K = 30 \text{ MPa}\sqrt{\text{m}}$.

50. (currently amended) An aluminum alloy rolled plate product according to claim 7, comprising a plate in T351 temper, having a da/dn in T-L direction which fulfills ~~fulfills~~ at least one of the following conditions:

- da/dn less than $3.0 \cdot 10^{-5}$ mm/cycles at $\Delta K = 10 \text{ MPa}\sqrt{\text{m}}$,
- da/dn less than $1.0 \cdot 10^{-4}$ mm/cycles at $\Delta K = 15 \text{ MPa}\sqrt{\text{m}}$,
- da/dn less than $1.0 \cdot 10^{-3}$ mm/cycles at $\Delta K = 25 \text{ MPa}\sqrt{\text{m}}$,
- da/dn less than $3 \cdot 10^{-3}$ mm/cycles at $\Delta K = 30 \text{ MPa}\sqrt{\text{m}}$.

51. (currently amended) An aluminum alloy rolled plate product according to claim 8, comprising a plate in T351 temper having a da/dn in T-L direction which fulfills ~~fulfills~~ at least one of the following conditions:

- da/dn less than $3.0 \cdot 10^{-5}$ mm/cycles at $\Delta K = 10 \text{ MPa}\sqrt{\text{m}}$,
- da/dn less than $1.0 \cdot 10^{-4}$ mm/cycles at $\Delta K = 15 \text{ MPa}\sqrt{\text{m}}$,
- da/dn less than $1.0 \cdot 10^{-3}$ mm/cycles at $\Delta K = 25 \text{ MPa}\sqrt{\text{m}}$,
- da/dn less than $3 \cdot 10^{-3}$ mm/cycles at $\Delta K = 30 \text{ MPa}\sqrt{\text{m}}$.

52. (canceled)

53. (currently amended) An aluminum alloy rolled plate product according to claim 3, exhibiting in a corrosion test according to ASTM G 110, a maximum intergranular attack of less than 80 μm in T39 temper, and/or less than 200 μm in T851 temper, and/or less than 250 μm in T89 temper, and/or less than 300 μm in T351 temper.
54. (currently amended) An aluminum alloy rolled plate product according to claim 4, exhibiting in a corrosion test according to ASTM G 110, a maximum intergranular attack of less than 80 μm in T39 temper, and/or less than 200 μm in T851 temper, and/or less than 250 μm in T89 temper, and/or less than 300 μm in T351 temper.
55. (currently amended) An aluminum alloy rolled plate product according to claim 5, exhibiting in a corrosion test according to ASTM G 110, a maximum intergranular attack of less than 80 μm in T39 temper, and/or less than 200 μm in T851 temper, and/or less than 250 μm in T89 temper, and/or less than 300 μm in T351 temper.
56. (currently amended) An aluminum alloy rolled plate product according to claim 6, exhibiting in a corrosion test according to ASTM G 110, a maximum intergranular attack of less than 80 μm in T39 temper, and/or less than 200 μm in T851 temper, and/or less than 250 μm in T89 temper, and/or less than 300 μm in T351 temper.
57. (currently amended) An aluminum alloy rolled plate product according to claim 7, exhibiting in a corrosion test according to ASTM G 110, a maximum intergranular attack of less than 80 μm in T39 temper, and/or less than 200 μm in T851 temper, and/or less than 250 μm in T89 temper, and/or less than 300 μm in T351 temper.
58. (currently amended) An aluminum alloy rolled plate product according to claim 8, exhibiting in a corrosion test according to ASTM G 110, a maximum intergranular attack of less than 80 μm in T39 temper, and/or less than 200 μm in T851 temper, and/or less than 250 μm in T89 temper, and/or less than 300 μm in T351 temper.

59. (canceled)
60. (canceled) An aluminum alloy rolled plate product according to claim 10, exhibiting in a corrosion test according to ASTM G 110, a maximum intergranular attack of less than 80 μm in T39 temper, and/or less than 200 μm in T851 temper, and/or less than 250 μm in T89 temper, and/or less than 300 μm in T351 temper.
61. (canceled)
62. (currently amended) An aluminum alloy rolled plate product according to claim 3, exhibiting in a corrosion test according to ASTM G 110 a maximum intergranular attack of less than 70 μm in T39 temper, and/or less than 180 μm in T851 temper, and/or less than 220 μm in T89 temper, and/or less than 270 μm in T351 temper.
63. (currently amended) An aluminum alloy rolled plate product according to claim 4, exhibiting in a corrosion test according to ASTM G 110 a maximum intergranular attack of less than 70 μm in T39 temper, and/or less than 180 μm in T851 temper, and/or less than 220 μm in T89 temper, and/or less than 270 μm in T351 temper.
64. (currently amended) An aluminum alloy rolled plate product according to claim 5, exhibiting in a corrosion test according to ASTM G 110 a maximum intergranular attack of less than 70 μm in T39 temper, and/or less than 180 μm in T851 temper, and/or less than 220 μm in T89 temper, and/or less than 270 μm in T351 temper.
65. (currently amended) An aluminum alloy rolled plate product according to claim 6, exhibiting in a corrosion test according to ASTM G 110 a maximum intergranular attack of less than 70 μm in T39 temper, and/or less than 180 μm in T851 temper, and/or less than 220 μm in T89 temper, and/or less than 270 μm in T351 temper.
66. (currently amended) An aluminum alloy rolled plate product according to claim 7,

exhibiting in a corrosion test according to ASTM G 110 a maximum intergranular attack of less than 70 μm in T39 temper, and/or less than 180 μm in T851 temper, and/or less than 220 μm in T89 temper, and/or less than 270 μm in T351 temper.

67. (currently amended) An aluminum alloy rolled plate product according to claim 8, exhibiting in a corrosion test according to ASTM G 110 a maximum intergranular attack of less than 70 μm in T39 temper, and/or less than 180 μm in T851 temper, and/or less than 220 μm in T89 temper, and/or less than 270 μm in T351 temper.
68. (canceled)
69. (currently amended) An aluminum alloy rolled plate product according to claim 10, exhibiting in a corrosion test according to ASTM G 110 a maximum intergranular attack of less than 70 μm in T39 temper, and/or less than 180 μm in T851 temper, and/or less than 220 μm in T89 temper, and/or less than 270 μm in T351 temper.
70. (currently amended) An aluminum alloy rolled plate product according to claim 11, exhibiting in a corrosion test according to ASTM G 110 a maximum intergranular attack of less than 70 μm in T39 temper, and/or less than 180 μm in T851 temper, and/or less than 220 μm in T89 temper, and/or less than 270 μm in T351 temper.
71. (canceled)
72. (original) A lower wing skin structural member made in an aluminum alloy rolled plate product according to claim 3.
73. (original) A lower wing skin structural member made in an aluminum alloy rolled plate product according to claim 4.
74. (original) A lower wing skin structural member made in an aluminum alloy rolled plate

product according to claim 5.

75. (original) A lower wing skin structural member made in an aluminum alloy rolled plate product according to claim 6.

76. (original) A lower wing skin structural member made in an aluminum alloy rolled plate product according to claim 7.

77. (original) A lower wing skin structural member made in an aluminum alloy rolled plate product according to claim 8.

78. (canceled)

79. (original) A lower wing skin structural member made in an aluminum alloy rolled plate product according to claim 10.

80. (original) A lower wing skin structural member made in an aluminum alloy rolled plate product according to claim 11.

81. (original) A lower wing skin structural member made in an aluminum alloy rolled plate product according to claim 12.

82. (canceled)

83-93.(canceled)

94. (withdrawn) A method for obtaining an aluminum alloy rolled product according to claim 3, wherein said rolled product comprises a plate, said method comprising:

Casting a rolling ingot, followed by optional stress relieving, and scalping,

Homogenizing at a temperature between 450 and 510 °C,

Hot-rolling on a reversing mill, preferably with an exit temperature between 350 and 390 °C,

Optionally, for plate with a thickness of less than about 30 mm, conducting at least one intermediate reheating to about 480 °C, followed by one or more hot-rolling passes, the final exit temperature optionally being between 350 and 370 °C,

Solution heat treating at a temperature between 490 and 510 °C, followed by water quenching and natural aging,

Cold working by stretching alone or cold rolling followed by stretching, optionally followed by artificial aging.

95. (withdrawn) A method for obtaining an aluminum alloy rolled product according to claim 4, wherein said rolled product comprises a plate, said method comprising:

Casting a rolling ingot, followed by optional stress relieving ,and scalping,

Homogenizing at a temperature between 450 and 510 °C,

Hot-rolling on a reversing mill, preferably with an exit temperature between 350 and 390°C,

Optionally, for plate with a thickness of less than about 30 mm, conducting at least one intermediate reheating to about 480 °C, followed by one or more hot-rolling passes, the final exit temperature optionally being between 350 and 370 °C,

Solution heat treating at a temperature between 490 and 510 °C, followed by water quenching and natural aging,

Cold working by stretching alone or cold rolling followed by stretching, optionally followed by artificial aging.

96. (withdrawn) A method for obtaining an aluminum alloy rolled product according to claim 5, wherein said rolled product comprises a plate, said method comprising:
Casting a rolling ingot, followed by optional stress relieving ,and scalping,
Homogenizing at a temperature between 450 and 510°C,

Hot-rolling on a reversing mill, preferably with an exit temperature between 350 and 390 °C,

Optionally, for plate with a thickness of less than about 30 mm, conducting at least one intermediate reheating to about 480 °C, followed by one or more hot-rolling passes, the final exit temperature optionally being between 350 and 370 °C,

Solution heat treating at a temperature between 490 and 510 °C, followed by water quenching and natural aging,

Cold working by stretching alone or cold rolling followed by stretching, optionally followed by artificial aging.

97. (withdrawn) A method for obtaining an aluminum alloy rolled product according to claim 6, wherein said rolled product comprises a plate, said method comprising:

Casting a rolling ingot, followed by optional stress relieving ,and scalping,

Homogenizing at a temperature between 450 and 510 °C,

Hot-rolling on a reversing mill, preferably with an exit temperature between 350 and 390 °C,

Optionally, for plate with a thickness of less than about 30 mm, conducting at least one intermediate reheating to about 480 °C, followed by one or more hot-rolling passes, the final exit temperature optionally being between 350 and 370 °C,

Solution heat treating at a temperature between 490 and 510 °C, followed by water quenching and natural aging,

Cold working by stretching alone or cold rolling followed by stretching, optionally followed by artificial aging.

98. (withdrawn) A method for obtaining an aluminum alloy rolled product according to claim 7, wherein said rolled product comprises a plate, said method comprising:

Casting a rolling ingot, followed by optional stress relieving ,and scalping,

Homogenizing at a temperature between 450 and 510°C,

Hot-rolling on a reversing mill, preferably with an exit temperature between 350 and 390 °C,

Optionally, for plate with a thickness of less than about 30 mm, conducting at least one intermediate reheating to about 480 °C, followed by one or more hot-rolling passes, the final exit temperature optionally being between 350 and 370 °C,

Solution heat treating at a temperature between 490 and 510 °C, followed by water

quenching and natural aging,

Cold working by stretching alone or cold rolling followed by stretching, optionally followed by artificial aging.

99. (withdrawn) A method for obtaining an aluminum alloy rolled product according to claim 8, wherein said rolled product comprises a plate, said method comprising:

Casting a rolling ingot, followed by optional stress relieving, and scalping,

Homogenizing at a temperature between 450 and 510 °C,

Hot-rolling on a reversing mill, preferably with an exit temperature between 350 and 390°C,

Optionally, for plate with a thickness of less than about 30 mm, conducting at least one intermediate reheating to about 480 °C, followed by one or more hot-rolling passes, the final exit temperature optionally being between 350 and 370 °C,

Solution heat treating at a temperature between 490 and 510 °C, followed by water quenching and natural aging,

Cold working by stretching alone or cold rolling followed by stretching, optionally followed by artificial aging.

100. (canceled)

101. (withdrawn) A method for obtaining an aluminum alloy rolled product according to claim 10, wherein said rolled product comprises a plate, said method comprising:

Casting a rolling ingot, followed by optional stress relieving ,and scalping,

Homogenizing at a temperature between 450 and 510°C,

Hot-rolling on a reversing mill, preferably with an exit temperature between 350 and 390°C,

Optionally, for plate with a thickness of less than about 30 mm, conducting at least one intermediate reheating to about 480 °C, followed by one or more hot-rolling passes, the final exit temperature optionally being between 350 and 370 °C,

Solution heat treating at a temperature between 490 and 510 °C, followed by water quenching and natural aging,

Cold working by stretching alone or cold rolling followed by stretching, optionally followed by artificial aging.

102. (withdrawn) A method for obtaining an aluminum alloy rolled product according to claim 11, wherein said rolled product comprises a plate, said method comprising:

Casting a rolling ingot, followed by optional stress relieving, and scalping,

Homogenizing at a temperature between 450 and 510 °C,

Hot-rolling on a reversing mill, preferably with an exit temperature between 350 and 390°C,

Optionally, for plate with a thickness of less than about 30 mm, conducting at least one intermediate reheating to about 480 °C, followed by one or more hot-rolling passes, the final exit temperature optionally being between 350 and 370 °C,

Solution heat treating at a temperature between 490 and 510 °C, followed by water quenching and natural aging,

Cold working by stretching alone or cold rolling followed by stretching, optionally followed by artificial aging.

103. (withdrawn) A method for obtaining an aluminum alloy rolled product according to claim 12, wherein said rolled product comprises a plate, said method comprising:

Casting a rolling ingot, followed by optional stress relieving, and scalping,

Homogenizing at a temperature between 450 and 510 °C,

Hot-rolling on a reversing mill, preferably with an exit temperature between 350 and 390 °C,

Optionally, for plate with a thickness of less than about 30 mm, conducting at least one intermediate reheating to about 480 °C, followed by one or more hot-rolling passes, the final exit temperature optionally being between 350 and 370 °C,

Solution heat treating at a temperature between 490 and 510 °C, followed by water quenching and natural aging,

Cold working by stretching alone or cold rolling followed by stretching, optionally followed by artificial aging.

104. (withdrawn) A method for obtaining an aluminum alloy rolled product according to claim 13, wherein said rolled product comprises a plate, said method comprising:

Casting a rolling ingot, followed by optional stress relieving, and scalping,

Homogenizing at a temperature between 450 and 510 °C,

Hot-rolling on a reversing mill, preferably with an exit temperature between 350 and 390 °C,

Optionally, for plate with a thickness of less than about 30 mm, conducting at least one intermediate reheating to about 480 °C, followed by one or more hot-rolling passes, the final exit temperature optionally being between 350 and 370 °C,

Solution heat treating at a temperature between 490 and 510 °C, followed by water quenching and natural aging,

Cold working by stretching alone or cold rolling followed by stretching, optionally followed by artificial aging.

105. (canceled)

106. (currently amended) An aluminum alloy wherein when employed as plate comprising a thickness of at least about 12 mm ~~or sheet~~, presents a compromise between fracture toughness and mechanical strength in that it is suitable for use in lower wingskin ~~as well as fuselage products and fulfills,~~

~~wherein when used as a sheet or thin plate fulfilling~~ at least one of the following conditions (i) a tensile yield strength in the longitudinal direction ($TYS_{(L)}$) of more than 400 MPa, and an apparent fracture toughness $K_{app(T-L)}$ of more than $110 \text{ MPa}\sqrt{\text{m}}$, measured according to ASTM E 561 in the T-L orientation on a specimen with a width of $W=127 \text{ mm}$; (ii) an ultimate tensile strength in the longitudinal direction ($UTS_{(L)}$) of more than 450 MPa, and an elongation at fracture in the longitudinal direction of more than

24%; and/or (iii) a tensile yield strength in the longitudinal direction ($TYS_{(L)}$) of more than 400 MPa, and a Kahn stress R_e of at least 180 MPa,

and further wherein, when employed as thick plate having at least one the following combinations of properties : (i) a $UTS_{(L)}$ of more than 500 MPa, and a $K_{app(T-L)}$ of more than $75 \text{ MPa}\sqrt{\text{m}}$, measured according to ASTM E 561 on a 6.35 mm thick C(T) specimen with a width of $W=40 \text{ mm}$; (ii) a tensile yield strength in the longitudinal direction ($TYS_{(L)}$) of more than 450 MPa and a $K_{app(T-L)}$ of more than $77 \text{ MPa}\sqrt{\text{m}}$, measured according to ASTM E 561 on a 6.35 mm thick C(T) specimen with a width of $W=40 \text{ mm}$; and/or (iii) a tensile yield strength in the longitudinal direction ($TYS_{(L)}$) of more than 350 MPa and a Kahn stress R_e of at least 190 MPa.

107-119. (canceled)